

# Welcome to BIOE.44

## *Synthetic Biology Lab*

*Orientation Lecture*  
*Spring 2010*

# BIOE.44

## *Synthetic Biology Lab*

- *Reality is complicated*
- *Teaching is not the same as learning*
- *Studying is not the same as learning*
- *We see you as men and women, not boys and girls*
- *Risk taking is OK*
- *Mistakes are OK*

# BIOE.44

## *Synthetic Biology Lab*

### **COURSE MISSION**

- To prepare students for a future in biological engineering*
- To teach cutting edge skills through an authentic research experience*
- To inspire rigorous data analysis, critical thinking, and thoughtful communication*



# BioE 44: Synthetic Biology Lab

*Module 1: DNA Engineering*

*Module 2: Genetic Device Engineering*

*Module 3: DNA Synthesis*

*Module 4: Growing & Glowing*

*Module 5: Testing Your Designs*

# Module I

## *DNA Engineering*



*Cambridge iGEM 2009*



# Module 2

## *Genetic Device Engineering*



<http://www.le.ac.uk/geology/wdc2/well%20water.jpg>



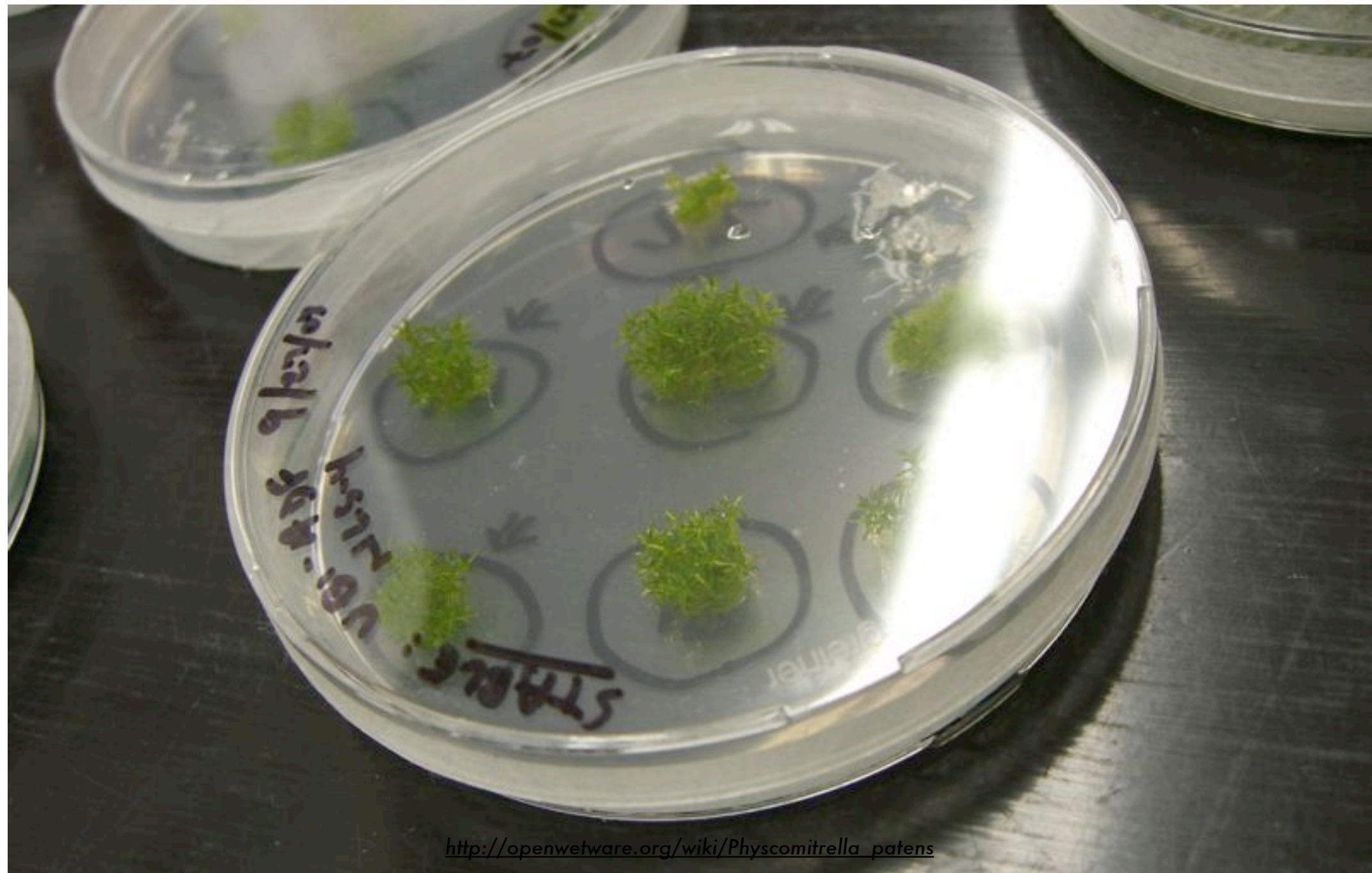
# Module 3

## *DNA Synthesis*



# Module 4

## *Growing & Glowing*



[http://openwetware.org/wiki/Physcomitrella\\_patens](http://openwetware.org/wiki/Physcomitrella_patens)



# Module 5

## *Testing*



[http://aviationweek.typepad.com/photos/uncategorized/2007/04/15/ares\\_cl30j\\_wing\\_test\\_hor.jpg](http://aviationweek.typepad.com/photos/uncategorized/2007/04/15/ares_cl30j_wing_test_hor.jpg)

# BIOE.44

## *Synthetic Biology Lab*

### ***EXPECTATIONS OF US***

- *That we will come to class and lab prepared*
- *That our assignments are clear and reasonable*
- *That we will treat every 44er with respect*
- *That we will give everyone an equal chance at success*



# BIOE.44

## *Synthetic Biology Lab*

### ***EXPECTATIONS OF YOU (SOME)***

- *That you will come to class and lab prepared*
- *That you will not interfere with each other's learning*
- *That you will invest the very best of yourself*
- *That you will offer honest and frequent feedback*

# BIOE.44

*Synthetic Biology Lab*

***COURSE DETAILS***

<http://openwetware.org/wiki/Stanford/BIOE44>